

# Mountains of Science! A Workshop for Grade 6–12 Teachers



Are you a grade 6–12 teacher looking for mountains of science, science in the mountains, and free science field trips for your students? Then, this course is for you!

**Dates:** July 5–7 & July 10–11, 2006

**Time:** 8:00 am–4:00 pm

**Location:** Santa Monica Mountains National Recreation Area

This course is an intensive and dynamic science workshop that combines classroom instruction and hands-on activities to educate teachers about environmental science and the natural world. Using park sites in the Santa Monica Mountains National Recreation Area as outdoor classrooms, workshop participants will learn about the National Park Service's free science-education programs:



- PARKS AS LABORATORIES (grade 6–8)
- STUDIES OF WILDLAND FIRE ECOLOGY (grade 9–12)

School students in these curriculum-based programs (which meet state standards) perform hands-on science investigations of the atmosphere, soil, water, trails, and plant fuel in the park, and they discuss how the data they collect can contribute to local, national, and global environmental monitoring endeavors. In this workshop, participants will do the same!

Grade 6–12 teachers who complete this five-day workshop will be given preference by the National Park Service for the Parks As Laboratories and Studies of Wildland Fire Ecology programs during the 2006–2007 school year. Teachers selected to participate can optimize their students' experiences in these programs by using the knowledge and skills acquired in this workshop.

**Registration and Materials Fee:** A non-refundable \$30.00 materials fee is required of all participants in advance of the workshop. Please see registration form for more details.

**Registration Deadline:** Monday, June 26, 2006. Workshop is filled on a first-come, first-served basis.



## **Continuing Professional Education (CPE) Credit:**

Two (2) credits are available through California Lutheran University for this course. There is a \$180.00 fee, payable to California Lutheran University, which will be collected on the first day of the workshop. Registration forms will be provided and completed at the workshop. CPE credits are not applicable to credentials or graduate programs. They are designed to meet the continuing education requirements for teachers in California. Not all school districts will accept these credits for salary allocation. Participants are responsible for checking with their district's salary allocation department and/or their collective bargaining agreement for information on the applicability of these credits.

**Course Instructors:** National Park Service staff, National Park Service consultants, and Henry Ortiz (Secondary Science Advisor, Los Angeles Unified School District)

**Course Content:**

National Park Service Science-Education Programs

- PARKS AS LABORATORIES (grade 6–8)
- STUDIES OF WILDLAND FIRE ECOLOGY (grade 9–12)



Environmental Science Lessons, Exercises, and Field Activities

- Concepts about atmosphere, water, and soil
- GLOBE™ equipment and protocols used in PARKS AS LABORATORIES and STUDIES OF WILDLAND FIRE ECOLOGY programs, including:

Atmosphere Protocols	Hydrology Protocols	Soil Protocols
ozone air temperature relative humidity barometric pressure cloud type and cover wind direction and speed	water temperature turbidity macroinvertebrates water pH dissolved oxygen analysis nitrogen analysis	soil temperature soil sampling soil moisture soil pH nitrogen, phosphorus, potassium (NPK) analysis

- Compass and Global Positional System (GPS) exercises
- Trail erosion and plant fuel-moisture protocols
- Learning skill exercises
- Environmental conflict resolution activity

Santa Monica Mountains

- National Recreation Area
- Plants and wildlife (including mountain lions!)
- Mediterranean ecosystem
- Fire ecology and management

**For More Information:**

Cathie Dunkel, Science-Education Program Coordinator,  
805-498-0305 or [cathie\\_dunkel@partner.nps.gov](mailto:cathie_dunkel@partner.nps.gov)





## Santa Monica Mountains National Recreation Area 2006 Teacher Workshop Registration Form

Mountains of Science! A Workshop for Grade 6-12 Teachers  
July 5-7 & 10-11, 2006

### Registration Information

A valid registration includes this completed form and payment of the \$30.00 materials fee. A separate registration form is required for each participant. Registration deadline is Monday, June 26, 2006.

- Please make your \$30.00 check payable to Western National Parks Association.
- Mail registration form and check to:  
Santa Monica Mountains National Recreation Area  
Attn: Education Programs, Barbara Applebaum or Lisa Okazaki  
401 West Hillcrest Drive  
Thousand Oaks, CA 91376
- Fees are non-refundable.
- We cannot hold reservations without payment.
- Workshops are filled on a first-come, first-served basis.

### Participant Information

Participant Name \_\_\_\_\_ Grade You Teach \_\_\_\_\_

Mailing Address \_\_\_\_\_

School \_\_\_\_\_ School District \_\_\_\_\_

School Address \_\_\_\_\_

Home Phone # \_\_\_\_\_ Cell Phone # \_\_\_\_\_

Work Phone # \_\_\_\_\_ E-mail Address \_\_\_\_\_

How did you hear about the workshop? \_\_\_\_\_

Do you have any accessibility needs? \_\_\_\_\_

### Continuing Professional Education (CPE) Credit

Three (3) Continuing Professional Education credits will be available through California Lutheran University. Registration and payment for CPE credits will take place on the first day of the workshop.

Are you taking the workshop for Continuing Professional Education Credit? Yes \_\_\_ No \_\_\_

### For More Information

Contact Cathie Dunkel at 805-498-0305 or [cathie\\_dunkel@partner.nps.gov](mailto:cathie_dunkel@partner.nps.gov).